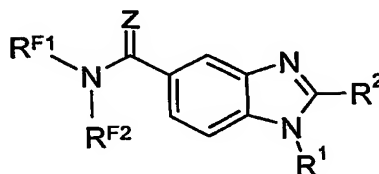


What is claimed is:

1. A compound of formula I or a pharmaceutically acceptable salt thereof:



I

wherein

$R^{F1}$  and  $R^{F2}$  are independently  $C_{1-6}$ alkyl substituted by one or more groups selected from -F, -Cl, -Br, -NO<sub>2</sub>, -CN, -OH, -CHO, -C(=O)-R' and -OR', wherein R' is a  $C_{1-3}$ alkyl;

Z is selected from O= and S=;

- 10  $R^1$  is selected from  $C_{1-10}$ alkyl,  $C_{2-10}$ alkenyl,  $C_{2-10}$ alkynyl,  $R^3R^4N$ - $C_{1-6}$ alkyl,  $R^3O$ - $C_{1-6}$ alkyl,  $R^3C(=O)N(-R^4)$ - $C_{1-6}$ alkyl,  $R^3R^4NS(=O)_2$ - $C_{1-6}$ alkyl,  $R^3CS(=O)_2N(-R^4)$ - $C_{1-6}$ alkyl,  $R^3R^4NC(=O)N(-R^5)$ - $C_{1-6}$ alkyl,  $R^3R^4NS(=O)_2N(R^5)$ - $C_{1-6}$ alkyl,  $C_{6-10}$ aryl- $C_{1-6}$ alkyl,  $C_{6-10}$ aryl-C(=O)- $C_{1-6}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocyclyl-C(=O)- $C_{1-6}$ alkyl,  $R^3R^4N$ -,  $R^3O$ -,  $R^3C(=O)N(-R^4)$ -,  $R^3R^4NS(=O)_2$ -,  $R^3CS(=O)_2N(-R^4)$ -,  $R^3R^4NC(=O)N(-R^5)$ -,  $R^3R^4NS(=O)_2N(R^5)$ -,  $C_{6-10}$ aryl,  $C_{6-10}$ aryl-C(=O)-,  $C_{3-10}$ cycloalkyl,  $C_{4-8}$ cycloalkenyl,  $C_{3-6}$ heterocyclyl and  $C_{3-6}$ heterocyclyl-C(=O)-; wherein said  $C_{1-10}$ alkyl,  $C_{2-10}$ alkenyl,  $C_{2-10}$ alkynyl,  $C_{6-10}$ aryl- $C_{1-6}$ alkyl,  $C_{6-10}$ aryl-C(=O)- $C_{1-6}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocyclyl-C(=O)- $C_{1-6}$ alkyl,  $C_{1-10}$ hydrocarbylamino,  $C_{6-10}$ aryl,  $C_{6-10}$ aryl-C(=O)-,  $C_{3-10}$ cycloalkyl,  $C_{4-8}$ cycloalkenyl,  $C_{3-6}$ heterocyclyl or  $C_{3-6}$ heterocyclyl-C(=O)- used in defining  $R^1$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy, and  $R^3R^4N$ ;

- 20  $R^2$  is selected from the group consisting of  $C_{1-10}$ alkyl,  $C_{2-10}$ alkenyl,  $C_{2-10}$ alkynyl,  $C_{3-10}$ cycloalkyl,  $C_{3-10}$ cycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl,  $R^3R^4N$ -,  $C_{3-5}$ heteroaryl,  $C_{6-10}$ aryl and  $C_{3-6}$ heterocycloalkyl, wherein said  $C_{1-10}$ alkyl,  $C_{2-10}$ alkenyl,  $C_{2-10}$ alkynyl,  $C_{3-10}$ cycloalkyl,  $C_{3-10}$ cycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl- $C_{1-6}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-6}$ alkyl,  $C_{4-8}$ cycloalkenyl,  $C_{3-5}$ heteroaryl,  $C_{6-10}$ aryl or  $C_{3-6}$ heterocycloalkyl used in defining  $R^2$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy and  $R^3R^4N$ ;
- 30  $R^3R^4N$ -, and

$R^3$  and  $R^4$  are independently selected from -H,  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl, and a divalent  $C_{1-6}$  group that together with another divalent  $C_{1-6}$  group selected from  $R^3$  and  $R^4$  forms a portion of a ring.

5 2. A compound as claimed in claim 1, wherein

$R^{F1}$  and  $R^{F2}$  are independently selected from -CF<sub>3</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH<sub>2</sub>CHF<sub>2</sub>, -CHFCH<sub>2</sub>F, -CHFCHF<sub>2</sub>, -CHFCH<sub>2</sub>F, -CF<sub>2</sub>CF<sub>3</sub>, -CF<sub>2</sub>CH<sub>3</sub>, -CF<sub>2</sub>CH<sub>2</sub>F, -CF<sub>2</sub>CHF<sub>2</sub>, -CF<sub>3</sub>, -CH<sub>2</sub>CCl<sub>3</sub>, -CH<sub>2</sub>CHCl<sub>2</sub>, -CH<sub>2</sub>CBr<sub>3</sub>, -CH<sub>2</sub>CHBr<sub>2</sub>, -CH<sub>2</sub>NO<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>NO<sub>2</sub>, -CH<sub>2</sub>CN, -CH<sub>2</sub>CH<sub>2</sub>CN, and -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>;

10 Z is O=;

$R^1$  is selected from  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl,  $R^3R^4N-C_{1-4}$ alkyl,  $R^3O-C_{1-4}$ alkyl,  $R^3C(=O)N(-R^4)-C_{1-4}$ alkyl, phenyl- $C_{1-4}$ alkyl, phenyl-C(=O)- $C_{1-4}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl-C(=O)- $C_{1-4}$ alkyl,  $R^3R^4N-$ ,  $R^3O-$ ,  $R^3R^4NS(=O)_2-$ ,  $C_{6-10}$ aryl,  $C_{6-10}$ aryl-C(=O)-,  $C_{3-10}$ cycloalkyl,  $C_{4-6}$ cycloalkenyl,  $C_{3-6}$ heterocyclyl and  $C_{3-6}$ heterocyclyl-C(=O)-; wherein said  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl, phenyl- $C_{1-4}$ alkyl, phenyl-C(=O)- $C_{1-4}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl-C(=O)- $C_{1-4}$ alkyl,  $C_{6-10}$ aryl,  $C_{6-10}$ aryl-C(=O)-,  $C_{3-10}$ cycloalkyl,  $C_{4-6}$ cycloalkenyl,  $C_{3-6}$ heterocyclyl or  $C_{3-6}$ heterocyclyl-C(=O)- used in defining  $R^1$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy and  $R^3R^4N-$ ;

$R^2$  is selected from the group consisting of  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{3-10}$ cycloalkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl,  $C_{3-5}$ heteroaryl,  $R^3R^4N-$ , phenyl and  $C_{3-6}$ heterocycloalkyl, wherein said  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{3-10}$ cycloalkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl,  $C_{3-5}$ heteroaryl, phenyl or  $C_{3-6}$ heterocycloalkyl used in defining  $R^2$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy and  $R^3R^4N-$ ; and

$R^3$  and  $R^4$  are independently selected from -H,  $C_{1-6}$ alkyl and  $C_{2-6}$ alkenyl.

30 3. A compound as claimed claim 1, wherein

$R^{F1}$  and  $R^{F2}$  are independently selected from -CF<sub>3</sub>, -CH<sub>2</sub>CF<sub>3</sub>, -CH<sub>2</sub>CHF<sub>2</sub>, -CHFCH<sub>2</sub>F, -CHFCHF<sub>2</sub>, -CHFCH<sub>2</sub>F, -CF<sub>2</sub>CF<sub>3</sub>, -CF<sub>2</sub>CH<sub>3</sub>, -CF<sub>2</sub>CH<sub>2</sub>F, -CF<sub>2</sub>CHF<sub>2</sub>, and -CF<sub>3</sub>;

Z is O=;

$R^1$  is selected from  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $R^3R^4N-$ ,  $R^3R^4N-C_{1-4}$ alkyl,  $R^3O-C_{1-4}$ alkyl,  $R^3C(=O)N(-R^4)-C_{1-4}$ alkyl, phenyl- $C_{1-4}$ alkyl, phenyl- $C(=O)-C_{1-4}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C(=O)-C_{1-4}$ alkyl, phenyl,  $C_{3-10}$ cycloalkyl,  $C_{3-6}$ heterocyclyl and  $C_{3-6}$ heterocyclyl- $C(=O)-$ ; wherein said

5  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $R^3R^4N-C_{1-4}$ alkyl,  $R^3O-C_{1-4}$ alkyl,  $R^3C(=O)N(-R^4)-C_{1-4}$ alkyl, phenyl- $C_{1-4}$ alkyl, phenyl- $C(=O)-C_{1-4}$ alkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{4-6}$ cycloalkenyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocyclyl- $C(=O)-C_{1-4}$ alkyl, phenyl,  $C_{3-10}$ cycloalkyl,  $C_{3-6}$ heterocyclyl or  $C_{3-6}$ heterocyclyl- $C(=O)-$  used in defining  $R^1$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy

10 and  $R^3R^4N-$ ;

$R^2$  is selected from the group consisting of  $C_{1-6}$ alkyl,  $C_{3-10}$ cycloalkyl,  $R^3R^4N-$ ,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl,  $C_{3-5}$ heteroaryl, and phenyl wherein said  $C_{1-6}$ alkyl,  $C_{3-10}$ cycloalkyl,  $C_{3-10}$ cycloalkyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl- $C_{1-4}$ alkyl,  $C_{3-6}$ heterocycloalkyl,  $C_{3-5}$ heteroaryl, and phenyl used in

15 defining  $R^2$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy and  $R^3R^4N-$ ; and

$R^3$  and  $R^4$  are independently selected from -H,  $C_{1-6}$ alkyl and  $C_{2-6}$ alkenyl.

4. A compound as claimed in claim 1, wherein

20  $R^{F1}$  and  $R^{F2}$  are  $-CH_2CF_3$ ;

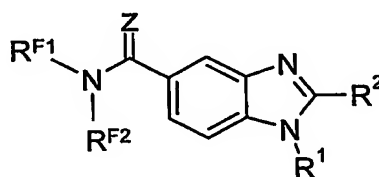
Z is O=;

$R^1$  is selected from cyclohexylmethyl, cyclopentylmethyl, cyclobutylmethyl, cyclopropylmethyl, ethyl, propyl, adamantyl, adamantylmethyl, allyl, isopentyl, benzyl, methoxyethyl, tetrahydropyranylmethyl, tetrahydrofuranylmethyl, cyclohexyloxy,

25 cyclohexylamino, dimethylaminoethyl, 4-pyridylmethyl, 2-pyridylmethyl, 1-pyrrolylethyl, 1-morpholinoethyl, 4,4-difluorocyclohexylmethyl, cyclohexylmethyl, 2-pyrrolidylmethyl, N-methyl-2-pyrrolidylmethyl, 2-piperidylmethyl, N-methyl-2-piperidylmethyl, 3-thienylmethyl, (2-nitrothiophene-5-yl)-methyl, (1-methyl-1H-imidazole-2-yl)methyl, (5-(acetoxymethyl)-2-furyl)methyl, (2,3-dihydro-1H-isoindole-1-yl)methyl, and 5-(2-methylthiazolyl); and

30  $R^2$  is selected from t-butyl, n-butyl, 2-methyl-2-butyl, cyclohexyl, cyclohexylmethyl, n-pentyl, isopentyl, trifluoromethyl, 1,1-difluoroethyl, N-piperidyl, dimethylamino, phenyl, pyridyl, tetrahydrofuranyl, tetrahydropyranyl, 2-methoxy-2-propyl, and N-morpholinyl.

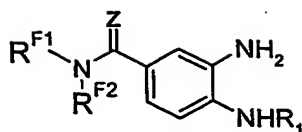
5. A compound selected from 2-*tert*-Butyl-1-(cyclohexylmethyl)-*N,N*-bis(2,2,2-trifluoroethyl)-1*H*-benzimidazole-5-carboxamide and pharmaceutically acceptable salts thereof.
- 5 6. A compound according to any one of claims 1-5 for use as a medicament.
7. The use of a compound according to any one of claims 1-5 in the manufacture of a medicament for the therapy of pain.
- 10 8. The use of a compound according to any one of claims 1-5 in the manufacture of a medicament for the treatment of anxiety disorders.
9. The use of a compound according to any one of claims 1-5 in the manufacture of a medicament for the treatment of cancer, multiple sclerosis, Parkinson's disease, Huntington's chorea, Alzheimer's disease, gastrointestinal disorders and cardiovascular disorders..
- 15 10. A pharmaceutical composition comprising a compound according to any one of claims 1-5 and a pharmaceutically acceptable carrier.
- 20 11. A method for the therapy of pain in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective amount of a compound according to any one of claims 1-5.
12. A method for preparing a compound of formula I,



I

comprising the step of reacting a compound of formula II,

- 28 -



## II

with a compound of  $R^2C(=O)-X$  to form the compound of formula I,  
wherein

- 5  $R^{F1}$  and  $R^{F2}$  are independently selected from  $-CF_3$ ,  $-CH_2CF_3$ ,  $-CH_2CHF_2$ ,  $-CHF_2CF_3$ ,  $-CHFCHF_2$ ,  $-CHFCH_2F$ ,  $-CF_2CF_3$ ,  $-CF_2CH_3$ ,  $-CF_2CH_2F$ ,  $-CF_2CHF_2$ , and  $-CF_3$ ;  
Z is selected from  $O=$  and  $S=$ ;  
X is selected from  $-Cl$ ,  $-Br$ ,  $-I$ ,  $-OH$ ,  $-OCH_3$ , and  $-OCH_2CH_3$ ;  
 $R^1$  is selected from  $C_{1-6}alkyl$ ,  $C_{2-6}alkenyl$ ,  $R^3R^4N-C_{1-4}alkyl$ ,  $R^3O-C_{1-4}alkyl$ ,  
10  $R^3C(=O)N(-R^4)-C_{1-4}alkyl$ , phenyl- $C_{1-4}alkyl$ , phenyl- $C(=O)-C_{1-4}alkyl$ ,  $C_{3-10}cycloalkyl-C_{1-4}alkyl$ ,  $C_{4-6}cycloalkenyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocyclyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocyclyl-C(=O)-C_{1-4}alkyl$ , phenyl,  $C_{3-10}cycloalkyl$ ,  $C_{3-6}heterocyclyl$  and  $C_{3-6}heterocyclyl-C(=O)-$ ; wherein said  $C_{1-6}alkyl$ ,  $C_{2-6}alkenyl$ ,  $R^3R^4N-C_{1-4}alkyl$ ,  $R^3O-C_{1-4}alkyl$ ,  $R^3C(=O)N(-R^4)-C_{1-4}alkyl$ , phenyl- $C_{1-4}alkyl$ , phenyl- $C(=O)-C_{1-4}alkyl$ ,  $C_{3-10}cycloalkyl-C_{1-4}alkyl$ ,  $C_{4-6}cycloalkenyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocyclyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocyclyl-C(=O)-C_{1-4}alkyl$ , phenyl,  $C_{3-10}cycloalkyl$ ,  $C_{3-6}heterocyclyl$  or  $C_{3-6}heterocyclyl-C(=O)-$  used in defining  $R^1$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy, and  $R^3R^4N$ ;  
 $R^2$  is selected from the group consisting of  $C_{1-6}alkyl$ ,  $C_{3-6}cycloalkyl$ ,  $R^3R^4N$ ,  
20  $C_{3-6}cycloalkyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocycloalkyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocycloalkyl$ ,  $C_{3-5}heteroaryl$ , and phenyl wherein said  $C_{1-6}alkyl$ ,  $C_{3-6}cycloalkyl$ ,  $C_{3-6}cycloalkyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocycloalkyl-C_{1-4}alkyl$ ,  $C_{3-6}heterocycloalkyl$ ,  $C_{3-5}heteroaryl$ , and phenyl used in defining  $R^2$  is optionally substituted by one or more groups selected from halogen, cyano, nitro, methoxy, ethoxy, methyl, ethyl, hydroxy and amino; and  
25  $R^3$  and  $R^4$  are independently selected from  $-H$ ,  $C_{1-6}alkyl$  and  $C_{2-6}alkenyl$ .